

CHANGEU.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**6040.15C CHG 3**

5/27/97

SUBJ: NATIONAL AIRSPACE PERFORMANCE REPORTING SYSTEM

1. **PURPOSE.** This change transmits revised pages to Chapter 1, Section 1 and Section 2; Chapter 2, Section 2; Chapter 3, Section 1, and Appendix 3.
2. **DISTRIBUTION.** This order is distributed to division level in Airway Facilities and Air Traffic Airspace Management in Washington headquarters, to branch level in the regional Airway Facilities and Air Traffic Divisions, to selected Air Traffic field offices, and to all Airway Facilities field offices with a standard distribution.
3. **EXPLANATION OF CHANGES.** This change defines actions required for equipment upgrades; adds TDWR, TDWRS, LLWS, WMSCR, and WDAT as reportable facilities/services; removes reference for reporting of CML, SCIP, and WMSCI facilities/services; redefines MCR as VRS facility type; redefines requirements for reportable equipment, LLWAS, TCOM, BUECS, RTR, VSCS, and VSCSS facilities/services; and categorizes and provides an index for examples listed in Appendix 3.
4. **DISPOSITION OF TRANSMITTAL.** After filing the revised pages, this change transmittal should be retained.

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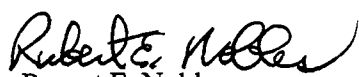
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36	8/25/94	36	5/27/97
37 and 38	8/25/94	37 and 38	5/27/97
41 and 42	12/23/91	41 and 42	5/27/97
43 and 44	8/25/94	43	5/27/97
		44	8/25/94

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		48	12/23/91
		49	5/27/97
		50	12/23/91
51 thru 54	8/25/94	51 thru 54-2	
APPENDIX 3		APPENDIX 3	
1 thru 18	12/23/91	1 thru 18-2	5/27/97



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when the appropriate AT personnel release the facility/service for maintenance. Certification may or may not have been partially or fully removed. Application of guidance for this condition may be found in the latest edition of Order 7210.3, Facility Operation and Administration, and Order 6000.15, General Maintenance Handbook for Airway Facilities. These incidents shall be reported as unscheduled interruptions at the time AT releases the facility/service for maintenance. In addition, a reduced facility/service operation may result if the criteria as specified under paragraph 106v of this order are met. See paragraphs 201f and 315 of this order for reporting requirements.

l. Frequency. A simplex channel of air/ground communications utilizing the same frequency for transmission and reception.

m. Hardware. In computer applications and elsewhere, the term hardware refers to the physical equipment or devices used to perform simple or complex functions. This term must be qualified by using an appropriate restrictive modifier to convey a specific identification or meaning.

n. Incident. A single occurrence relating to an interruption.

o. Interruption. A break in continuity, the loss or unavailability of a facility/service, regardless of duration.

p. May. MAY means an action is permitted.

q. Monthly. A reporting interval meaning one calendar month.

r. Nondaily. Generally, a reporting interval other than daily (see definition of daily in paragraph 106g of this order). For NAPRS purposes, the term nondaily when used in conjunction with facility interruptions means that these interruptions should be reported into the NAPRS as soon as possible but must be reported before the end of the month for inclusion, along with the daily interruptions, in the monthly update of the national data base. These nondaily interruptions may not be merged with the daily interruptions and transmitted to headquarters for the generation of the daily report as described in paragraph 300 of this order.

s. Outage. The loss of a facility/service for 1 minute or more.

t. Periodic. An occurrence or recurrence at regular intervals.

u. Personnel Error. Any interruption of a facility/service caused by human error.

v. Reduced Facility/Service Operation. When a facility or service is in use but is not capable of fulfilling its complete intended mission and the AT personnel in charge declare an operational impact; such as, the necessity to combine positions, delay of air traffic, and/or loss of essential air traffic control (ATC) functions. (See paragraph 315 of this order for reporting procedures.) Reduced facility/service operation is not limited to automation services.

w. Reimbursable. Reimbursable means that the FAA maintains equipment/ facilities which are not owned by the FAA and receives a reimbursement for this service.

x. Related Facility/Service Interruption. An interruption of a facility/ service caused or necessitated by an interruption of another facility/service. See paragraph 201j and Appendix 3, Examples of Reporting Incidents, for examples and reporting procedures.

y. Report Date/Time of an Interruption. When referring to an interruption incident, the report date/time will always be the time when the interruption first occurred. If interruption time is not available, the time when the FAA is first made aware is to be used. All times shall be entered as Coordinated Universal Time (UTC).

z. Report Period. Report periods identifying the time interval of reporting may vary with the particular reporting system. Detailed information concerning each report period is contained in paragraph 200 of this order.

* aa. Reportable Facility. Any commissioned facility, including reimbursable facilities for which reporting of interruptions has been designated. Reportable facilities are those listed in the Facility, Service, and Equipment Profiles (FSEP) under status code D, E, & F and responsibility codes A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, S, T, U, V, W, X, Y, Z, 1. Daily and nondaily reportable facility types are identified in paragraph 301 of this order. Additionally, facilities that are status code C and a responsibility code listed above, are reportable when in operational readiness demonstration (ORD) status.

bb. Reportable Equipment. Major hardware components for which reporting requirements have been established and performance is tracked. Reportable equipment (RE) reports are required for major hardware components when they are inoperable or unavailable for one minute or more due to unscheduled causes. A list of major components is provided in paragraph 316 of this order.

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cc. Reportable Service. Any service for which reporting of interruptions has been designated. All reportable services shall be entered in the FSEP using the status code Y or Z and the responsibility code which would be indicative of the remote site of the service. Reportable service provided to and/or from a military facility shall have a responsibility code of either I, R, or 9. Reportable service types are identified in paragraph 302 of this order.

dd. Restoration. Restoration includes all activities required to return a service or facility to operational status following a facility or service interruption.

ee. Scheduled Interruption. A term used to indicate that a facility or service interruption was coordinated for a predetermined period of time with prior approval from the facilities manager, assistant facilities manager, or other appropriate AT personnel. This coordination is required for the following maintenance activities listed in subparagraphs below. Also, scheduled interruptions can only be terminated by facility or service restoration, initiating unscheduled outages, or by decommissioning. If during a scheduled interruption,

mm. Total Unscheduled Interruption Time. The following definitions of total unscheduled interruption time shall be used. When applicable, the time from a computer printout may be used for the start time of an unscheduled interruption.

(1) Facility Reporting. Time begins with the initial FAA awareness of the interruption and ends when the facility is restored by appropriate AF personnel.

(2) Service Reporting. Time begins with the initial FAA awareness of the interruption and ends when the service is restored and accepted by the user (AT, military, etc.) regardless of whether the service is to be used at the time of acceptance.

nn. Umbrella Service. A hierarchical service which supports numerous underlying facilities and services. Normally, when an interrupted umbrella service is reported, interruption reports are not required for the underlying services. Umbrella services will be specifically identified throughout this order.

oo. Unmonitored Facility. A facility that has no remote monitoring capabilities.

pp. Unscheduled Interruption. An unscheduled interruption is:

(1) Any unanticipated interruption regardless of duration of a facility or service.

(2) Any out-of-tolerance/out-of-limit condition which results in the removal of a facility/service from the NAS.

(3) A facility that is reported out-of-tolerance by flight inspection.

(4) A hardware out-of-tolerance/out-of-limit condition which results from an equipment failure and/or malfunction and which prevents the restoration of a facility/service following a scheduled interruption. For this situation, the unscheduled interruption shall start immediately following the end of the original scheduled shutdown or the end of any approved extension which is granted to a scheduled shutdown.

(5) A software out-of-tolerance (specification) condition which prevents the restoration of a facility/service following a scheduled interruption. The unscheduled interruption shall start immediately following the end of the original scheduled shutdown or the end of any approved extension(s).

qq. User. AT personnel, military personnel, or the aviation public.

rr. Will. WILL indicates a presumption that action is to be taken.

107. TERMS UNIQUE TO EN ROUTE AUTOMATED RADAR TRACKING SYSTEM (EARTS) AND TERMINAL AUTOMATION SYSTEMS. The sources for the following terms are NAS-MD-604, System Description and Specification Series, and NAS-MD-634, System Description and Specification Series.

- a. Alternate. A backup device or mode to be utilized in lieu of other primary unit or mode.
- * b. Center Radar Automated Radar Terminal System (ARTS) Processing (CENRAP). A software/hardware modification that provides backup alphanumeric information using target data received by the ARTS equipment via the en route automation computer system through the existing IDAT (NAS/ARTS) interface. An azimuth pulse generator provides display sweep if needed. Interruption reporting of the terminal automated radar service (TARS) is required during CENRAP operation (see paragraph 207 b (2) for TARS reporting requirements). *
- c. Disk Pack. A storage device consisting of a stack of rotating magnetic discs which are used to store and recover digital data. The disk pack is used on a disk drive.
- d. Dump. To transfer all or part of the contents of one section of the computer memory into another section, storage device, or printout.
- e. Fault. A condition under which a malfunction occurs causing an interruption of the processor. This malfunction may have been caused by a physical breakdown or the attempted execution of an illegal function code.
- f. Firmware. A set of machine instructions which control the sequences and operation of the controller portion of a processor. The instruction code is hardwired into nondestructive read-only memory.
- g. Load. To read information into the computer.
- h. Loading Routine. A routine loaded into memory which may be used to load additional information.
- i. Parameter. A quantity which specifies operating conditions or configurations. The descriptions of variable data tables.
- j. Parity Check. Checking the one bits of a block of data to test whether the total number is odd or even.
- k. Pass. One cycle of processing a body of data.
- l. Scatter Interrupt. A class 2 interrupt which is the highest priority interrupt in the ARTS is usually indicative of a failure condition within the data processing subsystem or a manual recovery.

108. TERMS UNIQUE TO EN ROUTE AUTOMATION SYSTEM (EXCEPT FOR EARTS). The sources of the following terms are NAS-MD-310, Introduction to Specification Series; NAS-MD-317, Monitor; and NAS-MD-714, Display Channel Complex (DCC).

- a. Backup Device. The physical device adapted as backup for another physical device, manually or automatically reconfigured.

CHAPTER 2. FACILITY AND SERVICE REPORTING

SECTION 1. GENERAL REPORTING REQUIREMENTS

200. INTRODUCTION. This section contains general requirements for reporting daily and nondaily facility and service interruptions and defines the reporting periods for both. Daily and nondaily reportable facility and service types are identified in paragraphs 301 and 401 of this order, respectively. See appendix 3 of this order for examples of reporting incidents.

a. Reporting Periods.

(1) Daily Reporting. The reporting period for daily reporting covers a 24-hour period from midnight to midnight local time.

(2) Nondaily Reporting. The reporting period for nondaily reporting covers a period from 0000 UTC on the first day of the month until 2400 UTC on the last day of the month.

b. Reporting Times. All times shall be entered as UTC.

c. Reporting Transmission. Because the Maintenance Management System (MMS) has been implemented throughout all levels within AF, all interruptions are required to be entered into MMS. All interruptions are automatically transferred to the headquarters Maintenance Processor Subsystem (MPS) shortly after they are entered into MMS at each MPS.

(1) Daily Reportable. Interruptions that are daily reportable are required to be entered into MMS as close as possible to the start of the reportable occurrence.

(2) Nondaily Reportable. Interruptions that are nondaily reportable are required to be entered into MMS as soon as possible, but not later than the tenth calendar day following the reporting month.

d. Daily Reporting Requirements. Unless otherwise specified, automation facilities/services identified under paragraph 301 of this order with a # symbol are reportable for all interruptions, regardless of interruption duration. All other reportable facilities and services shall report interruptions of 1 minute or more in duration.

201. INCIDENTS TO BE REPORTED.

- * a. Newly Commissioned Facilities and Services. In concert with Order 6000.5, Facility, Service, and Equipment Profile (FSEP), newly commissioned facilities and services shall be reported immediately upon commissioning. Reportable facilities and services must be commissioned before interruption reporting results can be accepted into NAPRS. Therefore, the FSEP shall be updated in a timely manner even if it requires telephone coordination between the field and regional office.

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b. Decommissioned Facilities and Services. Facilities and/or services shall be reportable through the date of decommissioning. The facility/service shall remain in the FSEP in a commissioned status for 1 month to allow the updating of the national data base.

c. Service Location Identifiers. General instructions for service location identifiers are contained in the latest edition of Order 6000.5, Facilities, Service, and Equipment Profile. Specific instructions regarding service location identifiers, the use of suffixes, and identification of control and remote fields in the FSEP are provided in the appropriate paragraphs of this chapter where service reporting procedures are addressed. In addition to these instructions, the city and state location for reportable services shall always be the location of the remote field identifier used in the FSEP.

d. Service Performance Reporting. Service performance is measured in terms of the END PRODUCT from a combination of facilities and/or equipment as opposed to individual facility performance. For example, the RDAT may include the net performance result of the ARSR, CD, RCL, and ancillary equipment at the ARTCC and radar sites. The loss of any portion of this chain of facilities and equipment may result in an RDAT service interruption.

e. Facility/Service Available but Not in Use. If the restoration times for the facility and service are different, both times shall be identified in the report.

f. Continued Use of Deteriorated but Usable Facilities/Services. It is recognized that AT officials may choose to continue use of deteriorated but usable facilities/services (see paragraph 106k of this order). These incidents shall be reported as unscheduled service interruptions when AT releases the service. The time between initial awareness and the time of release may be reported as a reduced service report. See paragraph 315 of this order for reduced facility/service operation reporting requirements.

g. Military Service Interruptions. Services provided to FAA AT field offices from/to military-owned and maintained facilities are reportable.

h. Facility Performance Reporting. Facility performance is measured by recording individual facility interruptions. For example, the interruption of an ARSR at a long-range radar site would require an ARSR facility report. No report would be necessary for an ATCRB or CD even though a loss of signal input was experienced by these facilities. However, the appropriate services provided by these facilities would be reported as a related interruption, see appendix 3.

i. Associated Facility/Service Interruptions. An interruption to a facility/service that actually failed or was initially interrupted (see appendix 3). A facility unable to perform its intended mission as a result of a failure of a nonreportable service related component (control, line/link, or software) or a personnel error external to the site shall result in an interruption report for the service only if a service exists. A loss of availability of a facility that occurs internal to the site, including personnel errors, shall result in an interruption report for the facility and the affected services. An associated facility/service interruption will have the same cause code as the primary facility or service interruption entered on the NAPRS/MMS report.

g. TRAD, TSEC, and RTRDS Reporting.

(1) TRAD/TSEC Reporting. A TRAD (TSEC) service interruption is defined as the loss of primary (secondary) broadband radar on all operational displays used by ATC. TRAD/TSEC reporting will be required for any AT facility which provides broadband radar approach and/or departure control services. Those facilities which provide advisory service are not reportable as TRAD/TSEC (see RTRDS reporting).

(a) The TRAD/TSEC location identifier is the basic alphabetical identifier of the radar TR site. If an ASR radar TR site serves two terminal locations, the TRAD/TSEC location identifier for the second terminal shall bear the suffix "Z" on the basic alpha identifier of the radar site.

(b) A TRAD/TSEC report is not required if an instrument flight rules (IFR) room display or tower display fails and another display (tower or IFR room) is used by AT to provide service. All TRAD/TSEC interruptions are reportable regardless of digital or analog operation.

(c) At terminal radar approach control in tower cab (TRACAB) locations and at TRACONS with only BRITE indicators installed, a TRAD/TSEC report is required when AT has insufficient capability to control traffic because of display failures.

(d) Loss of decoding capability within the ARTS II equipment will not result in a TSEC service interruption.

(e) At multisensor terminals with more than one TRAD/TSEC service provided, you shall report any service that is interrupted even if it is not in use at the multisensor terminal by air traffic at the time of the failure.

(2) RTRDS Reporting. RTRDS reporting shall be required for those ATC facilities which provide broadband radar advisory service. These are satellite facilities remoted via television microwave link (TML) such as TERRA-COM and International Microwave Corporation (IMC), radar microwave link (RML), TELCO line (narrowband only), etc. An RTRDS service interruption is defined as a complete loss of both primary and secondary broadband radar information. The method of remoting does not affect the type of service reporting required. The location identifier for RTRDS is the identifier of the terminal where the service is provided. The control and remote location field in the FSEP shall carry the terminal and radar site identifier, respectively.

h. En Route Radar Services Reporting (ERAD, ESEC).

(1) ERAD/ESEC reports provide the primary and secondary en route radar (broadband) service picture as seen by the ARTCC for each primary and secondary radar regardless of the type of radar, remoting or display system, employed. An ERAD/ESEC interruption is defined as the loss of primary/secondary radar data on all operational displays used by ATC. For reporting purposes, CERAP facilities will be considered primarily a center activity and will report ERAD/ESEC. All ERAD/ESEC interruptions shall be reported regardless of whether the facility is operating in narrowband or broadband operation.

(2) The ERAD/ESEC location identifier is the identifier of the radar TR site. If the radar TR site serves two or more centers, the service identifier will bear the suffix starting with "Z" descending alphabetically for each center. If a radar site provides primary and secondary radar service to an ARTCC as well as to a terminal facility, the ERAD/ESEC location identifier for the ARTCC will bear the suffix "Z" on the basic alpha identifier of the radar site.

* i. Communications Microwave Link Repeater (CMLR), Communications Microwave Link Terminal (CMLT), Radio Communications Link Repeater (RCLR), Radio Communications Link Terminal (RCLT), Radar Microwave Link Repeater (RMLR), Radar Microwave Link Terminal (RMLT), Television Microwave Link Indicator (TMLI), Television Microwave Link Repeater (TMLR), and Television Microwave Link Terminal (TMLT) Reporting. The complete failure of CMLR, CMLT, RCLR, RCLT, RMLR, RMLT, TMLI, TMLR, and TMLT facilities shall be reported as a full (FL) interruption. Loss of one or more channels, which does not constitute a full facility interruption but causes a loss of service, shall be reported as a reduced facility/service (RS) against the facility along with a full (FL) interruption against the affected service. Link interruptions caused by path fade shall not be reported as a facility interruption but shall be reported for the particular service affected. *

j. MODE S/Data Link (MODE S) Reporting. MODE S is a replacement facility for the ATCRB and ATCBI. Facility type for this equipment is MODES. See ATCRB, paragraph 206c, for reporting requirements.

k. Identification, Friend, or Foe (IFF) Reporting. Interruption reporting for IFF facilities pertains to the USAF mode 4 equipment at joint-use TR sites. Report the mode 4 processor as facility type IFF and utilize the location identifier of the ARSR site.

l. MIG/MIM Reporting. Military CD height functions and associated interfaces are reported separately as MIG/MIM reports. Report the military interface group of the CD at joint-use ARSR sites as facility type MIG and use the location identifier of the ARSR site. This procedure will also be applicable at ARSR-3 facilities in which the MIM is added to the ARSR system.

m. Airport Surface Detection Equipment (ASDE) Reporting. A short-range airport radar facility in the terminal air traffic control system used to detect and display ground targets, such as aircraft, vehicles, and other objects on the ground, enabling an air traffic control specialist to expedite aircraft movement. A complete failure of this system to provide its intended function shall be reported. The associated displays shall be reported as part of the ASDE.

n. Digital Bright Radar Indicator Tower Equipment (DBRITE) Reporting. The DBRITE is a tower display system that provides a raster scan presentation of radar/beacon videos and automation system A/N data. Only reportable equipment (RE) requirements are applicable to this system and no other class of BRITE is reportable. Since DBRITE is not an FSEP-reportable facility type, all reports shall be made against the BRITE facility. See paragraph 316 for the list of reportable elements.

o. Sensor, Receiver and Processor (SRAP) Reporting. SRAP is a facility where primary and secondary radar data are acquired, correlated, merged, and then sent to a data processing system. A full SRAP interruption is defined as the complete loss of all its functions.

207. AUTOMATION FACILITY AND SERVICE REPORTING.

a. General. Reporting of all automation interruptions requires a joint AT and AF coordination and agreement prior to entering the data into MMS. In addition, the reporting of reduced facility/service operation and equipment failures of major hardware elements as described in paragraphs 315 and 316 of this order, respectively, is required.

b. Terminal Reporting (ARTS, TARS, RTADS, FDEP, Radar Beacon Data Processor Equipment (RBDPE), Flight Data Input/Output Remote (FDIOR)).

(1) ARTS Reporting. ARTS facility reporting shall cover the complete loss of usable alphanumerics caused by interruptions of the ARTS equipment located in the control facility. Software interruptions shall be reported under the TARS service only, not ARTS. All interruptions are reportable for a 24-hour day regardless of published nonoperational hours. The control and remote location field in the FSEP for ARTS and TARS shall carry the same identifier as the ARTS facility.

* (2) TARS Reporting. TARS reports cover the loss of usable alphanumerics on all operational positions used for ATC at automated radar terminal facilities equipped with ARTS. At terminals equipped with RBDPE (TPX-42), TARS interruptions will be reported for a loss of usable numerics on all operational positions. All interruptions are reportable for a 24-hour day regardless of published nonoperational hours. At a minimum, TARS reduced facility/service (RS) interruption reporting is required during CENRAP operation.

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(3) RTADS Reporting. RTADS reports cover the loss of usable alphanumerics at satellite towers, regardless of the type of remoting. Unlike the broadband services (RTRDS or TRAD/TSEC), RTADS reporting is not dependent on what type of control services (advisory or radar separation) are provided by the tower. All interruptions, 1 minute or more in duration, caused by a TARS/ARTS interruption are reportable for a 24-hour day regardless of published nonoperational hours. The location identifier for RTADS is the identifier of the terminal where the service is provided. The control and remote location field in the FSEP shall carry the terminal and radar site identifier, respectively.

(4) RBDPE Reporting. RBDPE facility reporting shall cover the complete loss of usable numerics caused by interruptions of the RBDPE equipment located in the control facility. For reporting purposes, do not include the numeric generation conversion equipment (NGCE) as part of RBDPE. Interruptions attributed to NGCE will be reported under TARS. All interruptions are reportable for a 24-hour day regardless of published nonoperational hours.

(5) FDIOR Reporting. FDIOR provides direct interface between a remote air traffic control facility and an ARTCC. An FDIOR interruption exists when a remote control unit (RCU) is inoperative, or when all replacement alphanumeric keyboards (RANK) are not available for input, or when all of the flight strip printers (FSP) are not available for output. These interruptions shall be reported as a full FDIOR interruption. Reduced facility/service reporting is applicable for the FDAT service when a component fails and does not constitute a full interruption and creates an impact on air traffic. For example, the loss of one or more RANK or FSP, but not all, or the loss of a cathode ray tube (CRT) display may have an impact on air traffic.

c. En Route and Terminal (IDAT, FDAT).

(1) IDAT Reporting.

(a) IDAT service is the interfacility data information interchange capability existing between the ARTCC CCCH and the individually associated Interfacility Data System (IFDS) sites; i.e., TRACON/ARTS, traffic management computer complex (TMCC) facility, or another ARTCC facility, inclusively. An IDAT service interruption is defined as the loss of operationally acceptable data communications capability from the ARTCC to the remote site. An IDAT service is not reportable when the ARTS facility is out of service unless hardware/software malfunction in the ARTS is directly related to the failure of the data communications capability.

(b) IDAT reporting is assigned to the ARTCC. The location identifier will be that of the ARTS facility for ARTS/ARTCC IFDS installations. For ARTCC/ARTCC IFDS sites, the basic identifier will be that of the geo- graphically most eastern ARTCC, with appropriate suffixes added in inverse alphabetical order when the most eastern ARTCC has interfacility data to more than one ARTCC; e.g., the IDAT service between Atlanta and Memphis, Houston and Indianapolis ARTCCs would be identified as ZTL, ZTLZ and ZTLY. The geo- graphically most eastern center will be considered the reporting ARTCC. The reporting ARTCC will be identified as the control location in the FSEP. See paragraph 213 of this order for leased communications (TELCO) reporting requirements. For TMCC/ARTCC IFDS sites, the ARTCC will be considered the reporting site for the service. For TMCC/NY TRACON IFDS sites, the NY TRACON will be considered the reporting site for the service. In addition, the ARTCC/NY TRACON sites shall use its basic identifier and any appropriate suffix, if required, for the services between the ARTCC/NY TRACON and TMCC facilities.

(2) FDAT Reporting. FDAT service is the flight data processing/ transfer capability existing between an ARTCC facility and a single remote FDIOR facility, inclusively. An FDAT interruption is defined as the loss of operationally acceptable flight data capability from the ARTCC to and including the remote FDIOR. CCCH/FDIOR interface problems that affect selective FDIOR sites will be reported under the appropriate FDAT service. Reporting is assigned to the ARTCC. The FDAT service will carry the same location identifier as the remote FDIOR facility. Military-owned and maintained Flight Data Entry and Printout (FDEP) sites will be reported utilizing the FDAT service report. See paragraph 213 of this order for leased communications (TELCO) reporting requirements.

(3) Multiplexed Circuit Reporting. When IDAT and FDAT services are multiplexed on the same data circuit, a loss of the data circuit shall cause an

interruption to each service. These services must be reported in MMS, entering the IDAT service on the initial LIR screen and the remaining service(s) on the associated/related screen. In addition, the IDAT line number must be added to the appropriate screen if leased circuits caused the interruption. If a backup was used to prevent or shorten the service interruption, appropriate backup information must be added.

d. En Route Automation Reporting (CCCH, CDC, DCC, BDAT, RDAT, CFAD, CRAD, DARC, DARC Radar Data Processing (DRAD), EARTS, (En Route Automated Radar Tracking System (ETARS)), Flight Data Input/Output Center (FDIOC). All interruptions shall be reportable for a 24-hour day regardless of published nonoperational hours. Unscheduled software interruptions (operational program aborts, etc.) are not to be reported against the facility (CCCH, DCC, CDC, DARC, etc.) but shall be reported under the appropriate service (CFAD, CRAD, DRAD, etc.).

(1) CCCH Reporting. The CCCH facility processes flight data and radar data at an ARTCC. A CCCH facility interruption is defined as a loss of the CCCH equipment's capability to fully process all of the flight data and/or radar data required by the operational program. All CCCH-caused interruptions and startovers are to be reported regardless of whether a service interruption resulted. For NAPRS reporting purposes, the peripheral adapter modules (PAM) are considered an element of the CCCH facility.

(2) CDC Reporting. The CDC (at selected ARTCC's) facility processes the radar display data provided by the associated CCCH facility. A CDC interruption is defined as a loss of the system's capability to fully process and display the required data. All CDC-caused interruptions and startovers are to be reported regardless of whether a service interruption resulted.

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(3) DCC/DCCR Reporting. The DCC/DCCR (at selected ARTCC's) facility processes the radar display data provided by the associated CCCH facility. A DCC/DCCR interruption is defined as a loss of the system's capability to fully process and display the required data. All DCC/DCCR-caused interruptions and startovers are to be reported regardless of whether a service interruption resulted.

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(4) CFAD Reporting. CFAD service covers all the flight data processing (FDP) capability within an ARTCC. A CFAD service interruption is defined as the loss of operationally acceptable FDP capability within the ARTCC.

(5) CRAD Reporting. CRAD service is the digitized radar data processing (RDP) from all radars serving the ARTCC. A CRAD service interruption is defined as the loss of operationally acceptable digitized radar data from the CCCH or CDC/DCC systems regardless of cause. A CRAD service interruption shall be reported even though DARC is serving as a primary system for RDP (see DARC reporting paragraph 207d(7) of this order).

(6) RDAT/BDAT Reporting. The RDAT/BDAT service is the digitized primary and secondary radar data presented at ARTCC and CERAP locations from a single remote ASR/ARSR and/or ATCRB/ATCBI site. Common equipment failures (modulator-demodulator (MODEM), TML/RML, FAA/TELCO line, data receiver group (DRG), CCCH adapter, etc.) will result in reporting interruptions for both services. Failures of individual components will result in a single service report. For example, failure of the ATCRB at an ARSR site would require a BDAT service report, but not an RDAT report. RDAT/BDAT reporting responsibility is

assigned to the ARTCC/CERAP location. The service identifier assignment for RDAT/BDAT is the same as for ERAD/ESEC (see paragraph 206h(2) of this order). See paragraph 213 of this order for leased communications (TELCO) reporting requirements. When RDAT and BDAT services are multiplexed on the same data circuit, a loss of the data circuit shall cause an interruption to each service. These services must be reported in MMS, entering the RDAT service on the initial LIR screen and the remaining service(s) on the associated/related screen. In addition, the RDAT line number must be added to the appropriate screen if leased circuits caused the interruption. If a backup was used to prevent or shorten the service interruption, appropriate backup information must be added.

(7) DARC Reporting. The DARC system is considered a backup facility to CDC/DCC. It does not, however, provide the full capabilities of CDC/DCC and its associated CRAD service. A DARC facility interruption is defined as a loss of the equipment's capability to provide its complete backup service. Software-related interruptions are not reported under DARC but shall be reported under the DRAD service.

(8) DRAD Reporting. A DRAD service interruption is defined as the loss of the radar data processing functions of the DARC system resulting in the loss of operationally acceptable digitized radar. A DRAD service interruption shall be reported whenever a DARC report is required.

(9) EARTS/ETARS Reporting. Control services provided by CERAP (San Juan) and other en route facilities utilizing ARTS equipment (Anchorage and Honolulu) shall report facility interruptions as EARTS and service interruptions as ETARS. The reporting criteria used for ARTS and TARS will apply to EARTS and ETARS.

* (10) FDIOC Reporting. FDIOC provides an interface between an air traffic controller and the ARTCC computer. For NAPRS reporting purposes, the FDIOC is considered an element of the CCCH facility and any failure should be reported against the CCCH facility. A complete failure of this system shall result in full FDAT service interruptions and may have an impact on AT resulting in a CFAD-reduced service. Also, reportable equipment (RE) reporting is applicable to this system. *

208. AIR/GROUND COMMUNICATIONS REPORTING.

a. En Route. ECOM and RCAG interruptions shall be reported whenever one or more frequencies are out of service. A frequency is out of service when the transmit or receive function or both are inoperable or when performance is degraded to the point where the service is unusable. Continuation of service by use of standby RCAG equipment does not constitute an interruption.

(1) ECOM Reporting. ECOM reports provide the en route air/ground communication service picture as seen by the ARTCC. An ECOM report shall be required even when backup communications equipment (backup emergency communications (BUEC), RML/RCL, selective signaling (SS-1), etc.) is used to prevent or reduce the duration of the service interruption. See paragraph 213 of this order for ARTCC leased communications (TELCO) reporting requirements. The ECOM location identifier will be the same as for the remote RCAG site. ECOM interruptions that are saved in less than one minute will not be included in the national data base.

(2) RCAG Reporting. Report only interruptions that pertain directly to the RCAG facility. Interruptions caused by interferences and FAA or TELCO line/link failures shall not be reported as RCAG interruptions but shall be reported by the ARTCC for the ECOM service affected.

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b. Terminal Communications Service (TCOM) Reporting. Individual air/ground frequency interruptions at airports shall be reported as TCOM service interruptions. A frequency is out of service when the transmit or receive function, or both, is inoperable or when performance is degraded to a point where the service is unusable at the control facility. The use of the service fault location and remarks will be used to identify the facility or equipment that caused the interruption. The TCOM service shall be identified by the remote facility's or family of facilities' ident. A "family" of RTR facilities is one or more RTR facilities at a single geographic location supporting one control facility. Each RTR facility within the "family" must have the same basic three letter identifier. A TCOM service shall be established at the control facility for each "family" of RTR facilities. Idents for multiple TCOM services for a single geographic location shall be distinguished by use of a suffix in addition to the basic three letter identifier. A TCOM report shall be required even when backup communications equipment is used to prevent or reduce the duration of the service interruption.

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c. Flight Service Station Communications Service (FCOM) Reporting. FCOM reports provide the terminal air/ground communications picture at an FSS/AFSS. Individual air/ground frequency interruptions shall be reported as FCOM service interruptions. Report only interruptions that pertain directly to the FCOM service. A frequency is out of service when the transmit or receive function, or both, is inoperable or when performance is degraded to a point where the service is unusable. An FCOM service shall be established in the FSEP for each RCO (this includes Frequencies-In-Place). The location identifier shall be the same as the identifier of the RCO facility. Alternate frequencies cannot be used to prevent a FCOM interruption report. If available, the appropriate backup system should be indicated on the FCOM interrupt report. The control facility has responsibility for FCOM reporting.

d. Ground Air Transmit/Receive Facility (GATR). Interruptions shall be reported whenever one or more frequencies are out of service. A frequency is out of service when the transmit or receive function, or both, is inoperable or when performance is degraded to the point where service is unusable. Report only interruptions that pertain directly to the GATR. Interruptions caused by interference or TELCO failure shall not be reported as GATR interruptions. Reporting responsibility is assigned to the FAA personnel maintaining the GATR facility. If the AN/GRC-171 is used as standby equipment to the GATR, its use can save a single frequency when it is interrupted. At those sites where multiple frequencies are interrupted at the same time, all these frequencies, minus one if AN/GRC-171 is used, shall be reported in NAPRS.

e. Back-Up Emergency Communications (BUEC). BUEC is a backup air-to-ground radio communications facility, generally remotely located, using tunable transceivers serving a center's control area. Report only interruptions that pertain directly to the BUEC facility. Interruptions caused by interferences and FAA or TELCO line/link failures shall not be reported as BUEC interruptions but shall be reported for the BUECS service affected. A full BUEC interruption is the complete loss of ability to transmit or receive at a single BUEC location.

f. BUEC Service (BUECS) Reporting. BUECS is the air-to-ground radio communications service provided by a single BUEC site to an ARTCC facility. The BUECS consists of transceiver equipment at the BUEC site and associated selecting equipment at the ARTCC facility. A full BUECS interruption shall be reported when a system is completely unavailable for service (e.g., loss of all transceivers at a BUEC site, a complete loss of capability to select a BUEC site, or the loss of all lines to a BUEC site). In the event of any BUEC component failures that do not constitute a full interruption, an RS report shall be made. Whenever possible, the remarks field shall contain, at a minimum, the AT sector affected and the identifier of the controlling ARTCC facility. Reporting responsibility is assigned to the controlling ARTCC facility. BUECS entries in the FSEP shall be made by the controlling ARTCC using its cost center, identifier of the BUEC site, and indicating itself as control. TELCO line reporting has been assigned to this service (see paragraph 213 of this order).

g. Remote Transmitter/Receiver (RTR) Reporting. Interruptions shall be reported when one or more frequencies are out of service. Report only interruptions that pertain directly to the RTR facility. A frequency is out of service when the transmit or receive function, or both, is inoperable or when performance is degraded to the point where service is unusable.

h. Remote Communications Outlet (RCO) Reporting. Interruptions shall be reported whenever one or more frequencies are out of service. A frequency is out of service when the transmit or receive function, or both, is inoperable or when performance is degraded to the point where service is unusable. Continuation of service by use of standby equipment located at the same RCO facility does not constitute an interruption.

i. Voice Switching and Control System (VSCS) Reporting. VSCS equipment failures which result in the loss of all ECOM services shall be reported as a full VSCS interruption. Any hardware failure which does not constitute a full interruption and creates an impact on AT operations shall be reported as a reduced facility/service VSCSS interruption.

* j. Voice Switching and Control System Service (VSCSS) Reporting. A full VSCSS interruption is defined as the inability to provide air-to-ground communications to the controller. A reduced facility/service VSCSS report is required for the loss of one or more, but not all, air-to-ground services. The loss of any interphone capability shall be reported as reduced facility/service VSCSS interruption. VSCSS is considered an umbrella service, individual ECOM reports are not required when a full VSCSS interruption is reported.

k. Voice Recorder System (VRS) Reporting (formerly Multichannel Recorder (MCR)). The VRS has capability to record and playback audio information transmitted or received by the air traffic specialist at an operating position. A typical VRS includes two tape transports, a monitor amplifier, a record amplifier, and a reproducer. All full interruptions shall be reported. A full VRS interruption is defined as the complete loss of capability to record voice data.

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(3) Loss of SSALR Only. Daily reportable facilities shall report a reduced facility/service identifying the SSALR in the Description field of the NAPRS report. Facilities that are class E, K, W, and 2, do not require an interruption report.

b. ALS, Medium-Intensity Approach Light System (MALS) with Runway Alignment Indicator Lights (RAIL) (MALSR), SSALR. When these facilities experience a loss of the RAIL/sequenced flasher lights (SFL) only, the ALS, MALS, or shortened approach light system (SALS) portion can still provide a usable service to the user. Therefore, no interruption report is required, with the exception of facilities located at daily NAS reportable airports. Facilities at daily NAS reportable airports shall report a reduced facility/service operation identifying the RAIL/SFL in the description field of the LIR as well as any change in runway category.

c. Lead-In Light Facility (LDIN) and Omnidirectional Airport Lighting System (ODALS) Reporting. A complete failure of any one of these systems to provide its intended function is reportable.

211. TELEMETERED SYSTEMS REPORTING.

a. Runway Visual Range (RVR) Reporting. Failure of the RVR to provide the effective visibility function for any reason, including loss of digital reading of runway light reference input, is reportable. System initiated built-in performance checks shall not be reported as interruption unless the checks reveal an out-of-tolerance condition requiring shutdown. To facilitate consistent reporting, all interruptions are reportable even though visibility is greater than 6000 feet.

* b. Low-Level Windshear Alert System (LLWAS) Reporting. LLWAS facilities consist of sensors which provide visual and audible warning indicators to air traffic. LLWAS processes and transfers microburst, windshear, windspeed, and wind direction. Reduced facility/service (RS) reporting applies to sensor/station failures that do not constitute a full LLWAS interruption. In the event a failed sensor/station generates a "windshear data unavailable for runway" condition within the LLWAS system, that condition shall be indicated in the remarks field of the RS report for that sensor/station. A full LLWAS interruption is defined as the loss of one of the following key elements of the system:

1. Remote Sensor/Station interruption criteria:

(a.) Original Five- or Six-Sensor System - Loss of all remote sensors/stations.

(b.) LLWAS Five- or Six-Sensor Improvement - Loss of two or more remote sensors/stations.

(c.) Expanded Network - Loss that is equal to or greater than 50 percent of all sensors/stations, including center field. For odd number sensor/stations system, round down to the next integer.

2. Original Five- or Six-Sensor System - Loss of center field sensor/station.

3. Central Processing Unit (CPU).

4. Loss of all displays.

NOTE: Facilities that provide windspeed and wind direction only are not considered LLWAS facilities and are not NAPRS reportable.

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- * c. Low-Level Wind Service (LLWS) Reporting. LLWS information such as windspeed, direction, windshear, and/or microburst data provided to the Display Function Unit (DFU) located in the ATCT and TRACON is identified as LLWS. Service interruption reporting applies only to LLWS that support TDWR operation. The inability to present microburst and/or windspeed, wind direction, and windshear data to the DFU, with 1 minute updates, is a full LLWS interruption. An LLWS shall be established for the transfer of data to the ATCT.

NOTE: Services that are designed to transfer windspeed and wind direction only are not NAPRS reportable.

- d. Terminal Doppler Weather Radar (TDWR) Facility Reporting. The TDWR facility provides radar information which is used for the detection of hazardous weather conditions. A full interruption report is required when the TDWR facility is unable to provide windshear and microburst information with 1 minute updates.

- e. TDWR Service (TDWRS) Reporting. TDWR service is microburst and windshear data provided to the DFU located at the ATCT or TRACON. The inability to present microburst and windshear information, or provide 1 minute updates, to the DFU(s) constitutes a full interruption. Loss of the Graphical Situation Display (GSD) would require TDWRS reduced facility/service interruption reporting. The use of LLWS data in absence of TDWR data requires full TDWRS reporting. Individual services shall be established for the transfer of data to the ATCT and the TRACON facilities. The service ident shall be that of the TDWR facility. Suffixes shall be applied in inverse alphabetical order to indicate multiple TDWR services from a single TDWR facility.

- f. Altimeter Setting Indicator (ASI) Reporting. ASI is an indicator that provides a numerical value of barometric pressure. A complete failure of this equipment to provide its intended function is reportable.

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212. UNIQUE FACILITY/SERVICE REPORTING. Several unique facilities/services, because of their importance to the NAS system, require interruption reporting. The reporting for these facilities/services shall be required if the service is unavailable to the user.

- a. Central Flow Control Service (CFCS) Reporting. CFCS is the service provided by the TMCC. All service interruptions of the TMCC are reportable. The reporting responsibility for CFCS is assigned to the Air Traffic Control System Command Central (ATCSCC) at headquarters. CFCS is supported by several IDAT services. See paragraph 207c (1) for IDAT reporting requirements.

- b. Flight Service Station Processing Service (FSSPS) Reporting. The FSSPS is the processed data provided to and displayed on the AFSS equipment. A full FSSPS interruption is defined as the loss of displayed data at all AFSS facilities associated with a single FSDPS resulting from an interruption within the FSDPS facility. FSSPS is considered an umbrella service. Individual Flight Service Station Automated Service (FSSAS) reports are not required when a full FSSPS interruption is reported.

- c. FSSAS Reporting. The FSSAS is the transfer and display of flight service data at each AFSS facility. Each FSSAS will be assigned the identifier of the AFSS facility. There will be an FSSAS for each FSDPS to AFSS configuration. A complete loss of the ability to transfer or display flight service data at an AFSS facility, including hardware/software elements at either the FSDPS or AFSS, shall be reported as a full FSSAS interruption. FSSAS interruption reports shall not be made if the cause of the interruption requires a full FSSPS report.

- * g. Weather Message Switching Center (WMSCR) Reporting. A full WMSCR interruption is defined as the failure of any equipment at WMSCR that prevents the collection, storage, and dissemination of weather data between circuits (Service A). Full WMSCR interruptions shall be reported.

NOTE: WMSCI service reporting is no longer required.

h. Weather Message Switching Center Service (WMSCS) Reporting. WMSC Service is the processing and transferring of Service A data to the NADIN Switch. A full WMSCS interruption is the inability to fully process and transfer Service A data. A WMSC service will exist for each switching center. WMSCS reporting responsibility is assigned to each switching center.

i. WMSC DATA (WDAT) Reporting. WDAT service is the data interchange capability between Atlanta (ATL) and Salt Lake City (SLC) weather message switching centers. A WDAT service interruption is the complete loss of this data interchange capability. WDAT reporting is assigned to the ATL switching center.

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j. Mass Weather Distribution System (MWDS). (Reserved)

k. Area Control Computer Complex (ACCC). (Reserved)

l. Radar Remote Weather Display Indicator (RRWDI) Reporting. A complete failure of the RRWDI equipment to process and display real-time weather information from selected FAA and National Weather Service (NWS) radar sites on all indicators is reportable.

m. Radar Remote Weather Display System (RRWDS) Reporting. A complete failure of the RRWDS equipment to process and display real-time weather information from selected FAA and NWS facilities is reportable.

n. Power Conditioning System (PCS) Reporting. The PCS equipment is a stand-alone system provided at high priority facilities to ensure conditioned and continuous alternating current (AC) electrical power to critical loads. PCS includes the systems formerly known as uninterruptable power source (UPS). All interruptions of PCS equipment, class B, C, D, E, and F, shall be reported. A full interruption is defined as the complete failure to provide conditioned and continuous AC power. Reportable equipment reports shall be made against the PCS for the failure of individual modules which do not constitute a full interruption.

o. Power Conditioning System Service (PCSS). The PCSS is the service provided by the power conditioning system (PCS) at ARTCC, ARTS, and CERAP locations. PCSS is reportable when the PCS is out of service or is involved in a facility/service interruption.

p. Automatic Terminal Information System (ATIS) Reporting. The ATIS provides a continuous broadcast of the latest terminal information to NAS users. ATIS is comprised of recording equipment (usually located at the tower), land lines, and a transmitter (usually collocated at a RTR site). A full interruption report is required when the ATIS is unable to provide a continuous broadcast of information.

q. Integrated Communications Switching System (ICSS) Reporting. The ICSS provides voice communication functions at ATCT, TRACON, and AFSS facilities. Complete failure of ICSS equipment shall be reported as a full interruption. Any component failure which does not constitute a full interruption and creates an impact on AT operations shall be reported as a reduced facility/service (RS) interruption.

r. WITHDRAWN--CHG 2

s. WITHDRAWN--CHG 2

t. WITHDRAWN--CHG 2

u. Enhanced Traffic Management System (ETMS) Service Reporting. An ETMS service interruption is defined as a loss of all flight data processing at the Enhanced Traffic Management computer complex, a loss of data due to transmission difficulties, or a loss of processing or displaying capability at an individual traffic management unit (TMU). An interruption of any flight data processing, transmitting, or displaying shall be reported against the appropriate ETMS service. Transmission of data will be via leased data links/lines, such as earth station to satellite facilities. Each ETMS service shall be identified by the TMU/ARTCC or TRACON identifier. RE reporting requirements are applicable for selected TMU elements and are reportable against the appropriate TMU facility.

v. AWP Reporting. AWP provides centralized capability for the collection, processing, and distribution of weather, NOTAM, and general Service B data to FSDPS facilities. A full AWP interruption is defined as the loss of any equipment at the AWP that prevents the collection, processing, and distribution of these data.

w. Aviation Weather Processor Service (AWPS) Reporting. A full AWPS interruption is defined as the loss of the capability to collect, process, and distribute weather, NOTAM, and general Service B data to all FSDPS facilities. AWPS is considered an umbrella service. Individual Aviation Weather Processor Transfer East (AWPTE) and Aviation Weather Processor Transfer West (AWPTW) reports are not required when a full AWPS interruption is reported.

x. Aviation Weather Processor/Concentrator (AWPC) Service Reporting. AWPC is the data transfer capability between an AWP and a NADIN concentrator. A full AWPC service interruption is defined as a complete loss of this data transfer capability. There will be two AWPC services. One AWPC will identify the transfer capability between ATL-AWP and ZTL-NADIN and the other will be between SLC-AWP and ZLC-NADIN. Each AWPC will be identified by the NADIN concentrator's identifier. AWPC interruption reporting will be assigned to the NADIN concentrator. A full AWPC report is not required when a full NADIN Switch (NADS) interruption is reported or when a NAMS interruption is reported for ZTL-NADIN or ZLC-NADIN.

b. Reporting Responsibility.

(1) AT. The AT supervisor will be responsible for assuring that all deficient leased communications services are reported to appropriate AF personnel.

(2) AF. AF personnel will be responsible for coordinating all TELCO reportable interruptions with the local serving company and entering the required data (e.g., line identification number, TELCO ticket number, and air/ground communications frequencies (if affected)) into MMS.

c. Reporting Requirements.

(1) Reportable Services. Leased communications (TELCO) services which include voice, data, and/or control information for the following services are reportable. This will include both primary and spare TELCO lines, microwave links, or satellite earth stations. An interruption of any leased circuit which is not in use in the NAS at the time of its interruption shall be reported as a line-only (LN) interruption.

(a) ECOM Reporting. These are leased circuits that provide the communications capabilities which exist between an ARTCC and a single remote RCAG facility. The MMS Administrative Line/Frequency (ALF) remote facility for ECOM is RCAG.

(b) FDAT Reporting. These are leased circuits that carry the flight data entry and printout service which exists between an ARTCC and a single remote FDEP/FDIOR facility. The MMS ALF remote facility for FDAT is FDEP or FDIOR.

(c) IDAT Reporting. These are leased circuits that carry the flight computer services between an ARTCC, ARTS, WMSC, or TMCC facilities. The MMS ALF remote facility for IDAT is IFDS.

(d) RDAT/BDAT (CD) Reporting. These are leased circuits that carry the beacon and radar data from a single remote radar and/or beacon facility to an ARTCC facility. The MMS ALF remote facility for RDAT or BDAT is CD.

(e) NADIN Data Interchange Service (NDAT) Reporting. These are leased circuits between NADIN switching centers. The MMS ALF remote facility for NDAT is NADIN.

(f) FSSAS Reporting. These are leased circuits between FSDPS (ARTCC) and the AFSS. The MMS ALF remote facility for FSSAS is AFSS.

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(g) WITHDRAWN--CHG 3.

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(h) NADIN Message Processing Service (NAMS) Reporting. These are leased circuits between NADIN switching centers and NADIN concentrators. The MMS ALF remote facility for NAMS is NADIN.

(i) BUECS Reporting. These are leased circuits between BUEC and ARTCC facilities. The MMS ALF remote facility for BUECS is BUEC.

(j) CNST Reporting. These are leased circuits between CNS and WMSC, USNOF, or the NADIN switches. The MMS ALF remote facility for CNST is CNS.

(k) AWPI Reporting. These are leased circuits between both AWP facilities. The MMS ALF remote facility for AWPI is AWP.

(l) AWPTE/W Reporting. These are leased circuits between the AWP and constituent FSDPS facilities. The MMS ALF remote facility for AWPTE or AWPTW is AWP.

(m) AWPC Reporting. These are leased circuits between the AWP and the NADIN concentrator. The MMS ALF remote facility for AWPC is NADIN.

(2) Reporting Classification. TELCO line interruptions will be classified by the appropriate cause code 81 or 61 as defined in paragraph 202 of this order for the following types of line interruptions.

(a) TELCO Scheduled. The removal of a line from service with prior approval by appropriate FAA personnel will be reported as a scheduled interruption cause code 61. Whenever possible, schedules for periodic routine maintenance must be mutually established between FAA and TELCO.

(b) TELCO Unscheduled. In reporting TELCO unscheduled interruptions cause code 81, the following guidelines shall be used:

1 Out-of-tolerance conditions that result in a loss of service will be reported as a TELCO unscheduled interruption.

2 In those cases when out-of-tolerance conditions are detected on still-usable leased service, and operational requirements do not allow for the release of service, no reports will be made to the serving company until the service can be released. However, under these circumstances, the interruption shall start when the reporting person advises TELCO that the service is released and will be reported as a TELCO unscheduled interruption.

3 All leased service out-of-tolerance conditions detected by agency personnel during a scheduled FAA maintenance shutdown shall be reported as a TELCO scheduled interruption only if the line is returned to service on or before the end of the original FAA scheduled downtime. If the line is returned after the FAA scheduled downtime, it shall be reported as a TELCO unscheduled interruption starting from the time FAA released the line to TELCO.

(c) FAA Scheduled. A line interruption for periodic maintenance purposes that has been scheduled by FAA will be reported as cause code 61.

(d) FAA Unscheduled. An unexpected interruption of a TELCO line resulting from FAA activities (e.g., FAA personnel error or error of non-FAA personnel working under FAA control and/or cognizance) will be reported as cause code 81.

(3) Multiplexed Service Line Reporting. Multiplexing provides a means of transmitting several services (e.g., IDAT, FDAT) on a common data line. A loss of a multiplexed data line will result in multiple NAPRS reportable service interruptions. These multiplexed service interruptions must be entered into MMS via an LIR. The primary service must be entered first into the initial LIR screen. If the cause of the interruption is TELCO, all services must have a cause code of either 61 or 81. All line information must be entered into the LIR. If an IDAT service is multiplexed, the IDAT service is considered primary for NAPRS line reporting. If an RDAT service is multiplexed without an IDAT, RDAT is considered primary for NAPRS line reporting. In a nonmultiplexed data line, the single NAPRS reportable service is considered primary for line reporting. Spare line interruptions must be reported against the primary service it supports. The interruption report must have an interruption condition of LN, appropriate line information, and NO backup data.

214. NADIN Reporting.

a. General. This section provides guidelines for reporting scheduled and unscheduled interruptions to NADIN services and facilities. A form of line interruption reporting is included.

b. NADIN Reporting. A NADIN facility consists of equipment located at the switching centers at Atlanta, Georgia, or Salt Lake City, Utah, or equipment comprising the concentrator at each ARTCC. This equipment processes, controls, and transfers data among the switching center and various terminals in and external to the ARTCC. A NADIN facility interruption is defined as the complete loss of capability to process, control, and transfer data at either switching center or at a constituent concentrator (ARTCC). NADIN facility reporting responsibility is assigned to each individual switching center and ARTCC (concentrator). RE reporting requirements are applicable for the NADIN facility.

c. NADS Service Reporting. NADS covers all message data processing at the NADIN switching center. A full NADS interruption is defined as a complete loss of operationally acceptable message data processing capability between a switching center and all of its constituent concentrators. There will be one NADS service for each NADIN switching center. NADS is considered an umbrella service. Individual NAMS reports are not required when a full NADS service interruption is reported.

* d. NAMS Reporting. NAMS covers the transfer of message data between the NADIN switching center to a NADIN concentrator. A full NAMS interruption is defined as a complete loss of the message data transfer capability to the NADIN concentrator. Failure of the NADIN Concentrator to complete the data transfer constitutes full NAMS interruption reporting. The starting time of the interruption shall be the time at which the NADIN switch declares the concentrator is in isolation. A separate NAMS shall be established for each switching center to concentrator configuration. Each NAMS will be identified by the concentrator's identifier. *

e. NDAT Reporting. NDAT service is the data interchange capability between the two NADIN switching centers. An NDAT service interruption is defined as a complete loss of this data interchange capability. An NDAT interruption will be reported as the result of a failure or out-of-tolerance condition of all data lines connecting the facilities which causes a degradation of the system beyond acceptable use. NDAT reporting is assigned to the Atlanta switching center. Atlanta switching center shall make an appropriate NDAT entry in the FSEP indicating ATL as the control site.

(3) Multiplexed Service Line Reporting. Multiplexing provides a means of transmitting several services (e.g., IDAT, FDAT) on a common data line. A loss of a multiplexed data line will result in multiple NAPRS reportable service interruptions. These multiplexed service interruptions must be entered into MMS via an LIR. The primary service must be entered first into the initial LIR screen. If the cause of the interruption is TELCO, all services must have a cause code of either 61 or 81. All line information must be entered into the LIR. If an IDAT service is multiplexed, the IDAT service is considered primary for NAPRS line reporting. If an RDAT service is multiplexed without an IDAT, RDAT is considered primary for NAPRS line reporting. In a nonmultiplexed data line, the single NAPRS reportable service is considered primary for line reporting. Spare line interruptions must be reported against the primary service it supports. The interruption report must have an interruption condition of LN, appropriate line information, and NO backup data.

214. NADIN Reporting.

a. General. This section provides guidelines for reporting scheduled and unscheduled interruptions to NADIN services and facilities. A form of line interruption reporting is included.

b. NADIN Reporting. A NADIN facility consists of equipment located at the switching centers at Atlanta, Georgia, or Salt Lake City, Utah, or equipment comprising the concentrator at each ARTCC. This equipment processes, controls, and transfers data among the switching center and various terminals in and external to the ARTCC. A NADIN facility interruption is defined as the complete loss of capability to process, control, and transfer data at either switching center or at a constituent concentrator (ARTCC). NADIN facility reporting responsibility is assigned to each individual switching center and ARTCC (concentrator). RE reporting requirements are applicable for the NADIN facility.

c. NADS Service Reporting. NADS covers all message data processing at the NADIN switching center. A full NADS interruption is defined as a complete loss of operationally acceptable message data processing capability between a switching center and all of its constituent concentrators. There will be one NADS service for each NADIN switching center. NADS is considered an umbrella service. Individual NAMS reports are not required when a full NADS service interruption is reported.

* d. NAMS Reporting. NAMS covers the transfer of message data between the NADIN switching center to a NADIN concentrator. A full NAMS interruption is defined as a complete loss of the message data transfer capability to the NADIN concentrator. Failure of the NADIN Concentrator to complete the data transfer constitutes full NAMS interruption reporting. The starting time of the interruption shall be the time at which the NADIN switch declares the concentrator is in isolation. A separate NAMS shall be established for each switching center to concentrator configuration. Each NAMS will be identified by the concentrator's identifier. *

e. NDAT Reporting. NDAT service is the data interchange capability between the two NADIN switching centers. An NDAT service interruption is defined as a complete loss of this data interchange capability. An NDAT interruption will be reported as the result of a failure or out-of-tolerance condition of all data lines connecting the facilities which causes a degradation of the system beyond acceptable use. NDAT reporting is assigned to the Atlanta switching center. Atlanta switching center shall make an appropriate NDAT entry in the FSEP indicating ATL as the control site.

CHAPTER 3. REPORTABLE FACILITIES/SERVICES/EQUIPMENT

SECTION 1. INCIDENTS TO BE REPORTED

300. GENERAL. This chapter establishes reporting requirements for components of the NAS which are classified as reportable. It specifies the detailed data requirements for facility and service interruption reporting. The information reported serves as a basis for briefing top management levels in the field and FAA headquarters on trends which may cause additional problems in the NAS. These pertinent problems may then be used as the basis for national telecons, as well as for discussion with other significant NAS items.

301. REPORTABLE FACILITIES AND SERVICES. This paragraph identifies those facilities and service types designated as NAPRS reportable. Each region will only report facilities and services for which they have FSEP responsibilities.

a. Reportable Facility Type.

<u>Facility</u>	<u>Description</u>
AFSS	Automated Flight Service Station
ALS	Approach Light System
ARSR	Air Route Surveillance Radar
# ARTS	Automated Radar Terminal System
ASDE	Airport Surface Detection Equipment
ASI	Altimeter Setting Indicator
ASOS	Automated Surface Observing System
ASR	Airport Surveillance Radar
ATCBI	Air Traffic Control Beacon Interrogator-Beacon Only Site
ATCRB	Air Traffic Control Radar Beacon-Collocated with ASR/ARSR
ATIS	Automatic Terminal Information System
AWOS	Automated Weather Observing System
AWP	Aviation Weather Processor
BRITE	Bright Radar Indicator Tower Equipment
BUEC	Backup Emergency Communications
# CCCH	Central Computer Complex Host
CD	Common Digitizer (Including ARSR-3 CD, see paragraph 206B)
# CDC	Computer Display Channel
CMLR	Communications Microwave Link Repeater
CMLT	Communications Microwave Link Terminal
# DARC	Direct Access Radar Channel
# DCC	Display Channel Complex (IBM 9020E)
# DCCR	Display channel Complex Rehost
DF	Direction Finder
DFI	Direction Finder Indicator
DME	Distance Measuring Equipment collocated with GS/LOC/VOR
DMER	Distance Measuring Equipment - TACR with DME only commissioned
# EARTS	En Route Automated Radar Tracking System
FDIOC	Flight Data Input/Output Center

<u>Facility</u>	<u>Description</u>	
FDIOR	Flight Data Input/Output Remote	
FM	Fan Marker	
FOTS	Fiber Optics Transmission System	
FSDPS	Flight Service Data Processing System	
GATR	Ground Air Transmit/Receive Facility	
GS	Glide Slope	
ICSS	Integrated Communications Switching System	
IFF	Military Mode 4 Processor	
IM	Inner Marker	
LDIN	Lead-In Lights	
LLWAS	Low Level Wind Shear Alert System	
LOC	Localizer	
LOM	Compass Locator at the ILS Outer Marker	*
* MALS	Medium-Intensity Approach/Light System	
MALSR	Medium-Intensity Approach/Light System with RAIL	
MIG	Common Digitizer Military Interface Group	
MIM	Military Interface Modification on ARSR-3	
MLSA	Microwave Landing System Azimuth	
MLSBA	Microwave Landing System Back Azimuth	
MLSD	Microwave Landing System Distance Measuring Equipment Precision	
MLSE	Microwave Landing System Elevation	
MLSF	Microwave Landing System Flare	
MM	Middle Marker	
MODES	Mode S Data Link	
MPS	Maintenance Processor Subsystem	
NADIN	National Data Interchange Network	
NDB	Non Directional Beacon	
NRCS	National Radio Communications System (HF SSB 1k Station only)	
NXRAD	Next Generation Weather Data	
ODALS	Omnidirectional Airport Lighting System	
ODAPS	Oceanic Display and Planning System	
OFDPS	Offshore Flight Data Processing System (ZHN only)	
OM	Outer Marker	
PCS	Power Conditioning System	
PUP	Principal User Processor	
RBDPE	Radar Beacon Data Processor Equipment (TPX-42)	
RCAG	Remote Center Air/Ground Communications Facility	
RCLR	Radio Communications Link Repeater	
RCLT	Radio Communications Link Terminal	
RCO	Remote Communications Outlet	
RMLR	Radar Microwave Link Repeater	
RMLT	Radar Microwave Link Terminal	
RRWDI	Radar Remote Weather Display Indicator	
RRWDS	Radar Remote Weather Display System	
RTR	Remote Transmitter/Receiver	
RVR	Runway Visual Range	

Facility Description

	SALS	Short Approach Light System	
	SRAP	Sensor, Receiver, and Processor	
	SSALR	Simplified Short Approach Light System with RAIL	
	SSALS	Simplified Short Approach Light System	
	TACR	Tactical Air Navigation - Collocated with VOR	
*	TDWR	Terminal Doppler Weather Radar	*
	TMLI	Television Microwave Link Indicator	
	TMLR	Television Microwave Link Repeater	
	TMLT	Television Microwave Link Transmitter	
	VOR	Very High Frequency Omnidirectional Range	
*	VRS	Voice Recording System	*
	VSCS	Voice Switching and Control System	
*	WMSCR	Weather Message Switching Center Replacement	*

b. Reportable Service Types (Pseudo Facilities for Service).

	<u>Service</u>	<u>Description</u>	
	AWPC	Aviation Weather Processor/Concentrator	
	AWPI	Aviation Weather Processor Interface	
	AWPS	Aviation Weather Processor Service	
	AWPTE	Aviation Weather Processor Transfer - East	
	AWPTW	Aviation Weather Processor Transfer - West	
	BDAT	Beacon Data (Digitized)	
	BUECS	Backup Emergency Communications Service	
#	CFAD	Composite Flight Data Processing (FDP)	
	CFCS	Central Flow Control Service	
	CODAP	Composite Oceanic Display and Planning	
	COFAD	Composite Offshore Flight Data	
#	CRAD	Composite Radar Data Processing (RDP)	
#	DRAD	DARC Radar Data Processing	
	ECOM	En Route Communications	
	ERAD	En Route Radar (Broadband)	
	ESEC	En Route Secondary Radar Beacon (Broadband)	
#	ETARS	En Route Terminal Automated Radar Service	
	ETMS	Enhanced Traffic Management System	
	FCOM	Flight Service Station Communications	
	FDAT	Flight Data Entry and Printout (FDEP) Service	
	FSSAS	Flight Service Station Automated Service	
	FSSPS	Flight Service Station Processing Service	
	IDAT	Interfacility Data Service	
*	LLWS	Low Level Wind Service	*
	MPSS	Maintenance Processor Subsystem Service	

	<u>Service</u>	<u>Description</u>	
	NADS	NADIN Switch	
	NAMS	NADIN Message Transfer Service	
	NDAT	NADIN Data Interchange Service	
	PCSS	Power Conditioning System Service (ARTCC, CERAP, and ARTS Facilities)	
	RDAT	Radar Data (Digitized)	
	RTADS	Remote Tower Alphanumeric Display Service	
	RTRDS	Remote Tower Radar Display Service	
#	TARS	Terminal Automated Radar Service	
	TCOM	Terminal Communications	
*	TDWRS	Terminal Doppler Weather Radar Service	*
	TRAD	Terminal Radar	
	TSEC	Terminal Secondary Radar	
	VSCSS	Voice Switching and Control System Service	
*	WDAT	WMSC Data Service	*
	WMSCS	Weather Message Switching Center Service	

c. Reportable Interruptions. All interruptions of 1 minute or more in duration to facilities and services listed in paragraphs 301a and b shall be reported. All facilities and services identified with an (#) shall report all **UNSCHEDULED** interruptions regardless of the duration.

302. MULTIPLE FACILITY/SERVICE ENTRIES. The basic design of MMS will allow those facility/service interruptions that are associated or related to the facility/service being reported to be identified in the same LIR. All problems encountered during recovery of related/associated services shall be identified. See the MMS user's guide for logging procedures for associated/related entries.

303. REPORT CONTENT. Content and format instructions for reporting facility and service interruptions are found in the NAPRS/MMS user's guide. Specific reporting requirements for automation can be found in Section 2, Automation Reporting, of this chapter.

304. FACILITY OR RUNWAY STATUS REPORTING.

a. Commissioning/Decommissioning of NAS Facilities. The commissioning or decommissioning of a facility/service that is designated as daily reportable under paragraph 301 shall be reported. The MMS Facility Commissioning/ Decommissioning (LFC) report shall be used with the national reportability flag set.

b. Category II and/or III Runway Status. Any change in status of Category II/III runways located at airports listed in appendix 4 of this order shall be reported. Downgrading of Category II or III runway capability not related to an interruption of a facility within that system (e.g., control line, runway marking, backup power problems, touchdown zone lighting system, runway centerline lighting system, etc.) shall also be reported. The upgrading of runway category for those locations identified in appendix 4 of this order shall be reported when commissioned. The MMS Administrative/General (LAD) report shall be used with the national reportability flag set.

305. ADDITIONAL REPORTABLE EQUIPMENT REPORTING REQUIREMENTS. For daily reporting purposes, an RE report shall be made for interruptions in excess of 12 hours of standby equipment on the ARSR, ASR, ATCRB, MODES, and ATCBI facilities.

306.-310. RESERVED.

SECTION 2. AUTOMATION REPORTING

311. GENERAL. With the exception of expected interruptions during coordinated online certification, all interruptions, including those that do not affect the ATC display subsystem, shall be reportable. A series of consecutive interruptions where recovery did not result shall be reported as one incident. Total time of the interruption shall be reported as accurately as possible. If the actual duration of the interruption is not known, the reported time shall be rounded to the nearest 5 seconds. (See the NAPRS/MMS User's Guide for format and examples.)

312. RECOVERY MODES FOR REPORTABLE INTERRUPTIONS. For ARTCC systems, the types of recovery modes for reportable interruptions and related information shall include but will not be limited to the following:

a. CCCH (3083BX).

(1) Startup Modes (see definitions under paragraph 1081 of this order):

(a) Establish (commonly referred to a cold start).

(b) Reestablish (commonly referred to as rescue).

APPENDIX 3. EXAMPLES OF REPORTING INCIDENTS

This section lists examples that illustrate how various facility and service interruptions should be reported. Some of the examples include identifying the cause of the interruption. This is a requirement for reporting. See the MMS User's Guide for report format and additional information.

*

Example Reference Guide

<u>Facility or Service</u>	<u>Example Number</u>	<u>Facility or Service</u>	<u>Example Number</u>
ARSR.....	18,19,20	FDAT	24,38
ARTS	1,2,10,11,12	FDIOR.....	38
ASDE.....	17	FSSAS.....	53,54,56,57,58,59, 62,64
ASR	1,3,4,5,7,8,9	FSSPS	53,54,56,59,62,64
ATCRB.....	1,3,4,5,6,7,8,9,18,20	FSDPS.....	56,59
ATCBI.....	2	GS	46,47
AWP	53,54,55	IDAT	24
AWPS	53,55	IM.....	45
AWPC/I.....	53,55	LOC.....	46,48,49,50
AWPTE/W	53,54	LLWS.....	
BDAT	18,19,20,21,23	NADIN.....	60,62
BRITE	13,14	NADS.....	53,60,62
BUECS	41	NAMS	54,60,61,62
CCCH	22,24,26,27,28,29, 30,31,32,33,34,35	NDAT	63
CD	18,19,20,29	RCAG	42,43
CDC/DCC	21,22,23,24,25,26, 27,29,30,31,32,33, 34,35,36,37	RDAT.....	18,19,20,21,23
CENRAP	68	RTADS	10,13,14,15,16
CFAD	18,21,22,24,25,26, 27,29,30,31,32,33,34	RTRDS.....	14,15
CRAD	18,19,21,22,23,24, 25,26,27,29,30,31, 32,33,34,35,36,37	TACR.....	51,52
DARC	23,25,26,39,40	TARS	1,2,3,4,5,6,7,10,11,12
DME	44	TCOM.....	65,66
DRAD	18,22,23,24,25,26, 39,40	TDWR.....	67
ECOM	42,43	TMLR	15,16
ERAD	18	TRAD.....	1,3,4,5,7,8,9,10,11, 12,13,16
ESEC	18	TSEC.....	1,2,3,4,5,6,7,8,9,10, 11,12,13,16
		VOR	52
		WMSC	64
		WMSCI.....	64
		WMSCS	64

*

- * 1. The azimuth pulse generator (APG) unit fails in the ASR antenna creating a loss of all sweeps at the terminal indicators. The terminal facility provides a TARS service. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASR	Yes	80	N/A
ATCRB	No	-	-
TRAD	Yes	80	Remote
TSEC	Yes	88	Remote
ARTS	No	-	-
TARS	Yes	88	Remote

NOTE: Although the sweep was lost on all consoles at the indicator terminal and neither primary nor secondary radar and alphanumerics could be viewed, the ATCRB and ARTS facilities do not require reports since their operation as facilities was not affected. The TSEC and TARS services are reported and coded as related services.

2. The azimuth pulse generator (APG) unit at an ATCBI site fails causing the loss of all data to the ARTS at the terminal facility. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATCBI	Yes	80	N/A
TSEC	Yes	80	Remote
ARTS	No	-	-
TARS	Yes	88	Remote

3. A relay fails in the ATCBI-3 equipment at the ASR site. The terminal is providing a TARS service. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASR	No	-	-
ATCRB	Yes	80	N/A
TRAD	No	-	-
TSEC	Yes	80	Remote
ARTS	No	-	-
TARS	Yes	88	Remote

NOTE: Since the ASR equipment continued to function normally, no ASR or TRAD report is required. Note that the TARS is coded 88 (related) because the loss of TARS service was caused by a facility not directly associated with the ARTS.

*

- * 4. Failure of an ATCRB directional antenna resulted in loss of TSEC and TARS service. Broadband radar operation was not affected. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATCRB	Yes	80	N/A
ASR	No	-	-
TSEC	Yes	80	Remote
TRAD	No	-	-
TARS	Yes	88	Remote

5. The ATCRB interruption in example 4 continued until the ASR could be scheduled for repair of the directional antenna. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATCRB	Continuing	80	N/A
ASR	Yes	68	N/A
TSEC	Continuing	80	Remote
TRAD	Yes	68	Remote
TARS	Continuing	88	Remote

6. A technician working on the off-line ATCRB channel accidentally turned off the on-line channel causing the loss of TSEC to the tower. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATCRB	Yes	89	N/A
TSEC	Yes	89	Remote
TARS	Yes	88	Remote

7. An ASR modernization project required a shutdown of an ASR. The terminal is providing TARS service. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASR	Yes	62	N/A
ATCRB	No	-	-
TRAD	Yes	62	Remote
TSEC	Yes	68	Remote
TARS	Yes	68	Remote

*

Appendix 3

- * 8. ASR triggers are lost due to a failed component at the radar site. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASR	Yes	80	N/A
TRAD	Yes	80	Remote
ATCRB	No	-	-
TSEC	Yes	88	Remote

9. An air traffic controller at the tower inadvertently turned off the on-line ASR transmitter causing the loss of TRAD to the tower. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASR	No	-	-
TRAD	Yes	89	Control
ATCRB	No	-	-
TSEC	No	-	-

10. An I/OP at an ARTS facility fails, causing the loss of alphanumerics to all displays. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARTS	Yes	80	N/A
TARS	Yes	80	Control
TRAD	No	-	-
TSEC	No	-	-
RTADS	Yes	88	Remote

11. The data systems specialist at an ARTS facility improperly inserts a program patch in the operational program. Sometime after startup the program faults causes loss of alphanumerics to all displays. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARTS	No	-	-
TARS	Yes	89	Control
TRAD	No	-	-
TSEC	No	-	-

*

- * 12. In example 11, if the patch had been inserted properly and the logic of the program patch was not correct and causes a loss of alphanumerics to all displays, the cause code will be 86. The following facilities would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARTS	No	-	-
TARS	Yes	86	Control
TRAD	No	-	-
TSEC	No	-	-

13. An ARTS facility remotes alphanumeric data and primary and secondary radar data via a DBRITE system to a satellite tower. The DBRITE facility fails, causing a loss of remoted alphanumerics and all radar data. The satellite facility would report:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
RTADS	Yes	80	Remote
TRAD	Yes	80	Remote
TSEC	Yes	80	Remote

NOTE: Reportable Equipment (RE) requirements apply to the digital BRITE equipment (see paragraph 316 k).

14. If the satellite tower in example 13 utilized the data for flight advisory only, the following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
RTADS	Yes	80	Remote
RTRDS	Yes	80	Remote

15. If the satellite tower in example 14 was serviced by an FAA TML and its power supply failed causing a loss of both the alphanumerics and broadband radar data, the following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
TMLR	Yes	80	-
RTADS	Yes	80	FAA Line/Link
RTRDS	Yes	80	FAA Line/Link

*

- * 16. If the situation in example 15 involved a tower providing radar separation, the following results would occur:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
TMLR	Yes	80	-
RTADS	Yes	80	FAA Line/Link
TRAD	Yes	80	FAA Line/Link
TSEC	Yes	80	FAA Line/Link

17. Failure of an ASDE waveguide results in the loss of ground target presentation. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASDE	Yes	80	N/A

18. An ARSR-2 fails and the standby channel is inoperative. The failure causes the loss of all primary radar information (broadband and narrowband) at the ARTCC. A reduced CRAD service operation did not result. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARSR	Yes	80	N/A
ATCRB	No	-	-
CD	No	-	-
ERAD	Yes	80	Remote
ESEC	No	-	-
RDAT	Yes	88	Remote
BDAT	No	-	-
CFAD	No	-	-
CRAD	No	-	-
DRAD	No	-	-

NOTE: If the ARSR interruption had also caused the loss of the ESEC and BDAT services at the ARTCC, these would have been reported and coded as 88 (related).

19. An ARSR-3 experiences a failure in the common digitizer equipment. Digitized radar and beacon data are not available to the ARTCC. Lack of overlapping coverage resulted in the AT assistant manager declaring an operational impact for CRAD service. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARSR	No	-	-
CD	Yes	80	N/A
RDAT	Yes	80	Remote

*

- * 16. If the situation in example 15 involved a tower providing radar separation, the following results would occur:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
TMLR	Yes	80	-
RTADS	Yes	80	FAA Line/Link
TRAD	Yes	80	FAA Line/Link
TSEC	Yes	80	FAA Line/Link

17. Failure of an ASDE waveguide results in the loss of ground target presentation. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ASDE	Yes	80	N/A

18. An ARSR-2 fails and the standby channel is inoperative. The failure causes the loss of all primary radar information (broadband and narrowband) at the ARTCC. A reduced CRAD service operation did not result. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARSR	Yes	80	N/A
ATCRB	No	-	-
CD	No	-	-
ERAD	Yes	80	Remote
ESEC	No	-	-
RDAT	Yes	88	Remote
BDAT	No	-	-
CFAD	No	-	-
CRAD	No	-	-
DRAD	No	-	-

NOTE: If the ARSR interruption had also caused the loss of the ESEC and BDAT services at the ARTCC, these would have been reported and coded as 88 (related).

19. An ARSR-3 experiences a failure in the common digitizer equipment. Digitized radar and beacon data are not available to the ARTCC. Lack of overlapping coverage resulted in the AT assistant manager declaring an operational impact for CRAD service. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ARSR	No	-	-
CD	Yes	80	N/A
RDAT	Yes	80	Remote

*

- * 23. The CRAD service has been unavailable at an ARTCC due to scheduled activities. The DRAD, which was backing up the CRAD, fails due to equipment problems in the DARC. AT operation is switched to broadband. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CRAD	Continuing	60	Control
DARC	Yes	80	N/A
DRAD	Yes	80	Control
RDAT	No	-	-
BDAT	No	-	-

24. The CCCH facility at an ARTCC fails, causing the loss of all CFAD and CRAD services. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	Yes	80	N/A
CFAD	Yes	80	Control
CDC/DCC	No	-	-
CRAD	Yes	88	Control
DRAD	No	-	-
IDAT	No	-	-
FDAT	No	-	-

25. The DARC equipment at an ARTCC fails. At a later time, while the DARC is still inoperative, the CDC/DCC equipment fails and DARC failed to provide backup during the entire duration of the CRAD interruption. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CDC/DCC	Yes	80	N/A
CRAD	Yes	80	Control
DARC	Continuing	80	N/A
DRAD	Continuing	80	Control
CFAD	No	-	-

NOTE: The CRAD, CDC/DCC, DARC, and DRAD interruptions would be reported for the entire time that each existed.

*

- * 26. An ARTCC has scheduled the CCCH and CDC down for software corrective maintenance. While the DARC was being used as a primary system a display processor fails resulting in the loss of six displays. None of the other displays in the center were affected. Two of the sectors were operational and had to be combined at another operational position. An operational impact resulted. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CFAD	Continuing	67	Control
CRAD	Continuing	66	Control
DARC	Yes	80 (Reduced)	N/A
DRAD	Yes	80 (Reduced)	Control

27. An AT data system specialist enters an incorrect message resulting in NO-OP of the NAS system. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	No	-	-
CFAD	Yes	89	Control
CRAD	Yes	88	Control
CDC/DCC	No	-	-

28. An ARTCC is operating with the primary system on-line and PAM-3 is not available because of a hardware failure. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	Yes	80 (Equip Only)	N/A

29. For the situation in example 28 a request is made at 1300z and approved for a scheduled CCCH shutdown for 1430z to analyze and correct the problem in PAM-3. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	Yes	65	N/A
CFAD	Yes	65	Control
CRAD	Yes	68	Control
CDC/DCC	No	-	-

*

Appendix 3

- * 30. Before the scheduled shutdown in example 29 could begin PAM-1 experiences a parity error which causes the PAM to be removed from the system to attempt a replacement with the unavailable PAM-3. Interruption of service occurs at 1425z and AT and AF agree to keep the system out of service until the PAMs, PAM-1, and PAM-3 are repaired. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	Yes	80	N/A
CFAD	Yes	80	Control
CRAD	Yes	88	Control
CDC	No	-	-

NOTE: A cause code 80 is reported because the system failed prior to the approved scheduled shutdown.

31. An ARTCC has experienced five software program aborts in the past half hour. AT and AF agree that a shutdown should be taken to correct the problem. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	NO	-	-
CFAD	Yes	86	Control
CRAD	Yes	88	Control
CDC	No	-	-

NOTE: This shutdown cannot be scheduled because the software is not operating within operational requirements; i.e., the software is experiencing aborts.

32. An ARTCC that is equipped with a CCCH/CDC computer system is operating normally. However, response times are increasing gradually and the printed output is slowing down. The operational computer software does not indicate any abnormality. The hardware elements appear to be operating properly. In a matter of a few minutes the system output stops at all devices except at the system KDVT. The computer operator, at the direction of the systems engineer, pushes the external interrupt button. The system accomplishes a successful reestablish mode of startover and returns to a complete normal operation. Initial analysis of the events before and after the external interrupt and the abort dump output provides no indication as to the cause of the problem. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	Yes	87	N/A
CFAD	Yes	87	Control
CDC	Yes	87	N/A
CRAD	Yes	87	Control

*

- * 33. Reference example 32, two days later the same situation occurs and just prior to a complete lockout the systems engineer notices a paper jam on the systems maintenance and monitor console medium speed printer (MSP). The systems engineer enters a no-op input/output on a logical device message (NPIO) for the MSP. The situation clears and no more problems are encountered. The problem is created on command during testing. Because of this new information, the previous entries made two days earlier would be corrected to reflect a cause code 86 for the CCCH and CFAD, and a cause code 88 for CRAD. The CDC entry would be voided.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CFAD	Yes	86	Control
CDC	Voided	-	-
CRAD	Yes	88	Control

34. An AF computer operator loads an offline job assignment into the operational system resulting in an interruption. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CCCH	No	-	-
CFAD	Yes	89	Control
CRAD	Yes	88	Control
CDC/DCC	No	-	-

35. An AF technician removes an I/OT from DCC without proper power off procedures resulting in a NAS interruption. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
DCC	Yes	89	-
CRAD	Yes	89	Control
CCCH	No	-	N/A

36. The ASCO power switch in the CDC equipment room area fails; power transfer is successful but a momentary power failure occurs with a resultant service interruption. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CDC	Yes	80	N/A
CRAD	Yes	80	Control

*

Appendix 3

- * 37. An air-conditioning unit fails; CDC equipment overheats and result in a service interruption. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
CDC	Yes	80	N/A
CRAD	Yes	80	Control

NOTE: The cause of the equipment failure would be identified as environmental.

38. An approach control facility is equipped with one RCU, one RANK, and two FSP's. Both FSP's failed at the same time. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
FDIOR	Yes	80	N/A
FDAT	Yes	80	Remote

39. A problem is experienced on the DARC system in which R-Controls are lost. An investigation reveals that both CP's are malfunctioning. Air Traffic states that the only impact was that they noticed was that DARC was unavailable for R-Control inputs. Cause was unknown. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
DARC	No	-	-
DRAD	Yes	87	Control

40. A problem is experienced on the DARC system in which 12 PVD's do not have maps or radar data. An investigation reveals that two DP's may be malfunctioning. The cause is unknown. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
DARC	No	-	-
DRAD	Yes	87	Control

41. A complete power failure occurs at the XYZ BUEC site. Both UHF/VHF transceivers are out of service. No E/G is available at the site. The controlling ARTCC shall report the following condition:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
BUECS (XYZ)	Yes	82	Remote

*

- * 42. A technical specialist on an FAA-contracted modernization project accidentally cut into a TELCO cable outside the RCAG building. This resulted in the loss of ECOM service from the RCAG site. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ECOM	Yes	81	TELCO
RCAG	No	-	-

43. Loss of commercial power at an RCAG resulted in the engine generator assuming the load; however, the engine generator ran out of gas before commercial power could be restored. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
RCAG	Yes	83	N/A
ECOM	Yes	83	Remote

NOTE: If the initial fuel level was less than required minimums, the above example would be coded 83 (Standby Power) with a supplemental cause code of 4 (Insufficient Fuel).

44. A DME facility is reported out of service. When the equipment is checked at the site, no problems are found. The ARTCC NOM verifies reports of military electronic counter measure (ECM) operations in the area. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
DME	Yes	84	N/A

45. It was reasonably certain that a power surge at an inner marker caused the blown fuse which resulted in a loss of primary power. No interruption resulted until the batteries ran down. The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
IM	Yes	83	N/A

46. Runway construction (improvements) resulted in removing the glide slope and localizer from service for the period of time the runway was closed. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
LOC	Yes	62	N/A
GS	Yes	62	N/A

*

- * 47. A GS was scheduled out of service for 1 hour (1200Z-1300Z) for routine maintenance. During this time, an out-of-tolerance condition was detected and the cause was yet to be determined. At 1250Z, a request for a 2-hour extension (1300Z-1500Z) was made and approved by AT. At 1445Z, a failed component was found and placed on order, priority 1. At that time it was determined that delivery of the part would take 2 days and work would commence then. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
GS (1200Z-1445Z)	Yes	60	-
GS (1445Z-)	Yes	80	-

NOTE: The unscheduled outage will end when the GS is returned to service.

48. An air traffic controller inadvertently turned off a LOC. The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
LOC	Yes	89	N/A

49. A LOC was scheduled out of service for a scheduled flight inspection. The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
LOC	Yes	63	N/A

50. During the flight inspection of the LOC in example 49, an out-of-tolerance course width was detected. The problem could not be rectified and the flight inspection aircraft left the vicinity. The scheduled interruption shall be terminated and an unscheduled interruption shall commence at the time the aircraft left the vicinity. If the cause is still unknown at this time, the following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
LOC	Yes	87	N/A

NOTE: Once the problem has been identified, the LIR shall be updated with the appropriate cause code.

*

- * 51. Commercial power to a VORTAC site fails. It was determined that the engine generator started and assumed the load within the time required in the specifications. The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
TACR	Yes	82	N/A

NOTE: Since the engine generator equipment operated within specification, primary, rather than standby power is reported as the cause of the interruption.

52. Routine maintenance was performed on the TACR antenna at a VORTAC facility resulting in a related interruption of the VOR facility. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
VOR	Yes	68	N/A
TACR	Yes	60	N/A

53. A complete power failure occurs at the ATL AWP facility. The E/G was previously out for scheduled maintenance activities. The ATL NADIN facility is not affected. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
AWP	Yes	82	Control
AWPS	Yes	82	Control
AWPC/AWPI	No	-	-
AWPTE/W	No	-	-
NADS	No	-	-
NAMS	No	-	-
FSSPS/FSSAS	No	-	-

54. Data communications between ATL AWP and ZNY FSDPS were interrupted due to a TELCO failure. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
AWP/AWPS	No	-	-
ZNY AWPTE	Yes	81	TELCO
FSSPS/FSSAS	No	-	-

*

Appendix 3

- * 55. Data communications between both AWP facilities were interrupted due to a TELCO failure. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATL AWPI	Yes	81	TELCO
AWP/AWPS	No	-	-

56. At the FSDPS a scheduled load of the national data base (NDB) 56 day charting data will be loaded. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
FSSPS (ZXX)	Yes	66	Control
FSSAS (XYZ)	No	-	-
FSSAS (DEF)	No	-	-
FSSAS (ABC)	No	-	-

57. At the FSDPS, it was noted that the communications line A0 and A1 to the AFSS went down. The dial-backup was configured online (interruption time was 2 minutes). The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
FSSAS (ABC)	Yes	81	TELCO

58. At the FSDPS, it was noted that the communications line A0 to the AFSS was down. AFSS specialists indicated an impact to the FSSAS service. The following condition would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
FSSAS (ABC)	Yes	81 (Reduced)	TELCO

59. At the FSDPS, a weather retrieval trap-out occurred. The system stopped processing, a NDB reload was required to continue normal operation. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
FSSPS (ZXX)	Yes	86	Control
FSSAS (ABC)	No	-	-
FSSAS (XYZ)	No	-	-
FSSAS (DEF)	No	-	-

*

- * 60. A complete commercial power failure occurred at ATL switching center and the engine generator failed to assume the load.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATL NADIN	Yes	83	N/A
ATL NADS	Yes	83	Control
ZXX NAMS	No	-	-

61. TELCO lines between the SLC NADIN switching center and the ZLA ARTCC NADIN concentrator failed due to a power outage near Los Angeles, CA.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ZLA NAMS	Yes	81	TELCO

NOTE: ZLA NAMS can be restored when dial backup lines to SLC/ATL switching centers are activated and acceptable data transfer is provided.

62. A complete failure of a Front-End Processor (FEP) at the Salt Lake City NADIN causes a loss of data communication to concentrators located at Kansas City and Seattle. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
SLC NADIN	No *	80	N/A
SLC NADS	No *	-	-
ZKC NAMS	Yes	80	Control
ZSS NAMS	Yes	80	Control
FSSPS/FSSAS	No	-	-

NOTE: A reduced facility/service (RS) may be required for the NADS if an impact is recognized. Also, reportable equipment (RE) reporting requirements are applicable.

63. All TELCO lines between SLC and ATL switching Centers fail.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATL NDAT	Yes	81	TELCO

64. Data communications between NKA WMSC and ZTL FSDPS was interrupted due to a TELCO line failure.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
WMSC/WMSCS	No	-	-
FSSPS/FSSAS	No	-	-

*

- * 60. A complete commercial power failure occurred at ATL switching center and the engine generator failed to assume the load.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATL NADIN	Yes	83	N/A
ATL NADS	Yes	83	Control
ZXX NAMS	No	-	-

61. TELCO lines between the SLC NADIN switching center and the ZLA ARTCC NADIN concentrator failed due to a power outage near Los Angeles, CA.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ZLA NAMS	Yes	81	TELCO

NOTE: ZLA NAMS can be restored when dial backup lines to SLC/ATL switching centers are activated and acceptable data transfer is provided.

62. A complete failure of a Front-End Processor (FEP) at the Salt Lake City NADIN causes a loss of data communication to concentrators located at Kansas City and Seattle. The following conditions would result:

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
SLC NADIN	No *	80	N/A
SLC NADS	No *	-	-
ZKC NAMS	Yes	80	Control
ZSS NAMS	Yes	80	Control
FSSPS/FSSAS	No	-	-

NOTE: A reduced facility/service (RS) may be required for the NADS if an impact is recognized. Also, reportable equipment (RE) reporting requirements are applicable.

63. All TELCO lines between SLC and ATL switching Centers fail.

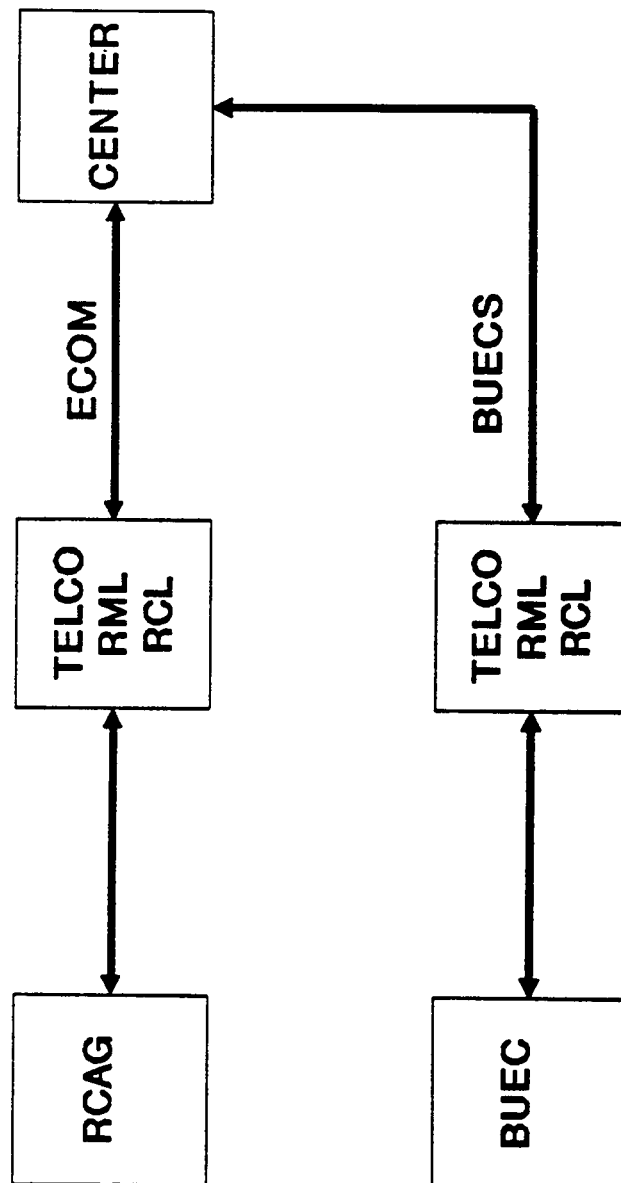
<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
ATL NDAT	Yes	81	TELCO

64. Data communications between NKA WMSC and ZTL FSDPS was interrupted due to a TELCO line failure.

<u>Facility/Service</u>	<u>Report Required</u>	<u>Cause Code</u>	<u>Service Fault Location</u>
WMSC/WMSCS	No	-	-
FSSPS/FSSAS	No	-	-

*

FIGURE 1. ARTCC EN ROUTE COMMUNICATION SERVICES



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